

ENVIRONMENTAL ASSESSMENT
Case File No.: A-059905 (2803)
AK-040-03-EA-010

Applicant: Bureau of Land Management
Anchorage Field Office

Type of
Action: Knik River Access Area Hazardous Materials Contamination Removal Action

Location: Section 10, T. 16 N., R. 1 E., Seward Meridian. The site is located off the Glenn Highway adjacent to the north bank of the Knik River.

Prepared by: Larry Beck, Environmental Protection Specialist

Preparing
Office: Bureau of Land Management
Anchorage Field Office
6881 Abbott Loop Road
Anchorage, AK 99507

Date: April 17, 2003

I. INTRODUCTION

A Material Site Right-of-Way for the Knik River Access Area was issued by BLM to the Alaska Department of Transportation and Public Facilities (ADOT&PF) in November 1963 (Map 1). The site was utilized by ADOT&PF as a mineral materials site, i.e. obtaining gravel; a pit covering approximately 19.2 acres was excavated for borrow material. During and/or after operation of ADOT&PF's gravel-pit activities, the general public began using the site for household solid waste disposal and firearms shooting/target practice. The site currently has one main pond that corresponds to the area excavated for borrow material (Map 2). The BLM now plans to convey the property from Federal to State ownership. Concern has been raised that the public activity has created solid waste and possible lead contamination at the site. The non-hazardous solid waste (household trash and recreational use litter) has since been removed and access to the site is now controlled by means of a Cooperative Management Agreement between BLM, ADOT&PF and Alaska Department of Fish and Game (ADF&G). During 2000, BLM sent a contractor to conduct random sampling of the site to determine if contaminants were present. In 2001, Harding ESE, under contract to BLM, conducted a detailed site characterization investigation of the areas noted to be of concern for possible lead/heavy metal contamination during the 2000 survey. During April 2002, Harding ESE delivered the Site Characterization Report. The report indicates levels of lead were found to exceed allowable regulatory levels in several locations at the site. The identified lead contaminated areas constitute a hazard to birds via ingestion, and a solid waste issue that must be remediated before land transfer can be accomplished.

A. Purpose and Need for the Proposed Action:

The purpose of this EA is to support remediation of lead contamination at this solid waste site. Currently the site is classed as a solid waste site. Should the lead contamination not be mitigated, the site could eventually become viewed by regulatory agencies as a hazardous waste site.

B. Conformance With Land Use Plan:

The lands are within the boundary of the Alaska Southcentral Planning Area Management Framework Plan (MFP), dated March 1980. The Proposed Action is covered under the Lands (L-1.1) and Watershed (W-1.1) Activity Objectives of the MFP which state that BLM is to "Exchange BLM administered lands that would best suit public needs if they were administered by another federal agency, the State or a local government" and "Maintain water quality of watersheds on BLM administered lands to comply with the Alaska Water Quality Standards".

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action:

BLM is proposing to remove contaminate from the Knik River Access Area Site, Section 10, T. 16 N., R. 1 E., Seward Meridian. Approximately 100 cubic yards of lead shot contaminated soil will be excavated from three areas identified as Backstop areas B1, B2, and B3 as detailed below and depicted on the site diagram (Figure 1). The “Backstops” are locations where a large concentration of bullets (lead) has accumulated on, and close to, the ground surface due to the target shooting activities. Contaminated soil from the Backstop areas will be excavated and disposed of appropriately. Recoverable lead will be recycled off-site if required for disposal of the soil. After excavation of the designated Backstop areas, confirmation of lead contamination removal shall be demonstrated by collecting an appropriate number of soil samples from the excavation areas and having them laboratory analyzed for lead. Sampling protocol used throughout will follow that prescribed in applicable State and Federal regulations. Excavation areas will be re-graded after confirmation sampling to return the areas to their pre-excavation general appearance and grade, to prevent accumulation of water/forming new ponds.

Backstop B1 (Figure 2). Excavate approximately 20 cubic yards of soil. The surface area is approximately 1,000 square feet. Excavation will be approximately six inches below ground surface.

Backstop B2 (Figure 3). Excavate approximately 10 cubic yards of soil. The surface area is approximately 500 square feet with a depth of six inches.

Backstop B3 (Figure 4). Excavate approximately 70 cubic yards of soil. The surface area is approximately 2,500 square feet. Excavation will be approximately six inches to one foot below ground surface.

There are two areas of the pond (Figure 5) where sampling indicates that lead contamination exceeds regulatory allowable levels. Approximately 5,700 square feet of pond bottom at Shooting Area A1, and approximately 12,000 square feet of pond bottom at Shooting Area A2 have sediments which contain lead at levels which require mitigation. The majority of the contaminated sediments are at a depth of about 13 feet below pond surface. Mitigation will be accomplished by capping the near-shore contaminated areas only. Solid lead is nearly immobile in the environmental conditions present at the site; lead will not readily dissolve into the pond water. Therefore, the concern is ingestion of lead by humans and/or wildlife. The cap will prevent lead particles being ingested by diving birds or becoming wind-borne during periods when the water level may become lower. The cap will most likely consist of a layer of clean soil borrowed from on-site.

All work areas in this project are on previously disturbed former mineral materials area (gravel pit). Remediation of the site is expected to be conducted during May 2003. Actual field work is anticipated to span approximately seven days. Some heavy equipment will be employed during the field work. A Backhoe or other type of excavator will be used to excavate soils and emplace the cap. Flatbed trucks will be used to transport equipment on and off site, and to transport the containerized backstop soils off the site for disposal. Existing roads/trails will be used by the vehicles.

B. No Action Alternative:

Under the No Action Alternative, the BLM will continue to implement current management practices. The property will therefore not be conveyed; the State of Alaska will not accept the property with known environmental liabilities.

C. Alternative Considered But Not Analyzed in Detail:

Removal of All Contaminated Material:

Under this alternative, the Backstop area soils and pond bottom sediments would be excavated and disposed off-site. The method for removal of the backstop soils would remain unchanged, however, the pond bottom sediments would also be excavated and disposed off-site. To excavate and dispose of the contaminated pond bottom sediments would require a much larger effort and expenditure of funds. The most likely scenario for excavating the pond sediments would be to drain the pond and scrape/scoop sediments off the bottom. The sediments would then be dewatered, containerized, characterized, then properly disposed off-site. ADOT&PF is responsible to pay for mitigation of this site. The extreme cost of this alternative will cause indefinite delays in project completion while funds are appropriated. This alternative is considered infeasible and will receive no further consideration in this EA.

III. AFFECTED ENVIRONMENT

A. Critical Elements:

The following critical elements are either not present or would not be affected:

Air Quality

Areas of Critical Environmental Concern

Environmental Justice

Farm Lands, Prime or Unique

Floodplains

Invasive, Non-native Species

Native American Religious Concerns

Wetlands/Riparian Zones

Wild and Scenic Rivers

Wilderness
Cultural Resources
Subsistence
T&E Species

1. Wastes, Hazardous or Solid:
Hazardous materials that will be removed from the site are approximately 100 cubic yards of containerized soils with lead shot. Materials to be disburser as the pond sediment cap are approximately 190 cubic yards of sand/gravel borrowed on-site.
2. Water Quality, Surface and Ground:
Surface and ground water at the site are not used as sources for drinking water.

B. Land Status:
The site is on land selected by the State of Alaska.

C. Soils:
The materials site is located in well drained soils located on higher parts of flood plains and low terraces. Soils, lying under a thin mat of forest litter, are dark gray, stratified silt loam and fine sandy loam 25 to 60 inches thick over loose, coarse sand, gravel, and cobblestones. White spruce, paper birch or cottonwood dominate the site.

D. Vegetation:
The area is dominated by deciduous trees and brush with scattered spruce trees. There is a significant amount of bare gravel and sand. Various local plants and grasses can be found in and around the site.

E. Wildlife:
The site of the Proposed Action and surrounding area supports a variety of animal species. Resident populations include moose, porcupine, snowshoe hare, microtine rodents and at least 50 species of resident and migrant birds. Non-resident mammal species that have been seen include fox, coyote, wolf, lynx, brown bear and black bear. These animals move through the area, probably from higher elevations during seasonal changes and heavy snowfall in search of prey species. Many migrant birds pass through the area during spring and fall migration, including several raptor and many neo-tropical land bird species. Shrub and mixed spruce and birch forest habitats provide nesting habitat for land birds and raptors, particularly Bald Eagles. There is one species of amphibian, the wood frog, that occurs in the area. The wetlands and tidal sloughs of the area,

and the adjacent Palmer Hayflats State Game Refuge provide exceptional breeding and migration habitat for shorebirds and waterfowl. The affected pond and surrounding wetlands are used by migrant and nesting shorebirds and waterfowl for feeding and migration staging.

IV. ENVIRONMENTAL CONSEQUENCES

A. Impacts of the Proposed Action:

1. Critical Elements:

a. T&E Species:

Based on currently available information, the Proposed Action would not affect any threatened or endangered species or their habitats. The impact of the Proposed Action and Alternative on threatened and endangered plants and animals and their habitats has been evaluated in accordance with the Endangered Species Act of 1973, as amended. Therefore, no consultation with the U.S. Fish and Wildlife Service is considered necessary pursuant to Section 7 of the Act and none will be undertaken.

b. Wastes, Hazardous or Solid:

Potential for spread of lead contamination during execution of the proposed removal actions is minimal; excavated soils at the Backstop areas will be placed directly into approved containers (one cubic yard "Supersacks") and the soil will be moist which will minimize generation of dust.

c. Water Quality, Surface and Ground:

There will be no impact to water quality as a result of the Proposed Action.

2. Soils:

There will be no impact to soils as a result of the Proposed Action; the entire area has been previously disturbed during ADOT&PF's use of the site.

3. Vegetation:

Some vegetation will be removed during excavation of the Backstop areas, and from where sediment cap material is to be excavated. All vegetation in the immediate area is re-growth following ADOT&PF's use of the site.

4. Wildlife:

The noise associated with equipment operation during remediation will temporarily displace wildlife from nearby, unaffected shrub and forest areas. Displaced animals may be more vulnerable to predators and may cause breeding birds to abandon nests and breeding territories, increasing mortality. However, the removal of the hazardous materials from the site is a positive action and outweighs the disturbances to wildlife and its habitat in the longer term.

B. Impacts of the No Action Alternative:

1. Critical Elements:

a. Subsistence:

Potential for bioaccumulation of toxins in plants and wildlife could occur if these chemicals are left unattended and free.

b. T&E Species:

Based on currently available information, the No Action Alternative would not affect any threatened or endangered species or their habitats.

c. Wastes, Hazardous or Solid:

If the lead contamination is not removed from the site, conveyance of the property will not be conducted, and the site may eventually become regulated as a Resource Conservation and Recovery Act hazardous waste site.

d. Water Quality, Surface and Ground:

Possible surface and ground water contamination could occur if the contaminants were to be left in place.

2. Soils:

The No Action Alternative, which involves leaving heavy metal (lead), will increase the likelihood of contamination spreading.

3. Vegetation:

Leachate created by run-off and acidification of surrounding lands could result in the loss of some vegetative cover if left unattended for a long period of time.

4. Wildlife:

Exposed, uncontainerized hazardous materials at the site could enter the food chain via direct or indirect consumption by animals. Lead shot in wetland sediments has a high potential to be ingested by waterfowl, shorebirds and other waterbirds. Lead ingested by birds, particularly ducks, geese and swans, is known to cause lead poisoning and death to migrant and breeding birds. Lead shot and bullets remain in the sediments for years and continue to expose birds to lead poisoning.

- C. Cumulative Impacts:
No residual or cumulative impacts are expected to be incurred by the implementation of the Proposed Action.

V. CONSULTATION AND COORDINATION

- A. List of Preparers:
Larry Beck – Environmental Protection Specialist, Lead Preparer
David Kelley – Natural Resource Specialist
Bruce Seppi - Wildlife Biologist